Translation

PCT/JP2003/004778

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference WN-2564(P)	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/JP2003/004778	International filing date (*day/month/year*) 15 April 2003 (15.04.2003)	Priority date (*day/month/year*) 15 April 2002 (15.04.2002)
International Patent Classification (IPC) or national classification and IPC H01M 8/04, 8/00, 8/10, G06F 1/20		
Applicant NEC CORPORATION		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☒ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
29 July 2003 (29.07.2003)	29 March 2004 (29.03.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP2003/004778

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed

☐ the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the claims:

pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the drawings:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP 03/04778

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	3, 5, 8, 10, 14	YES
	Claims	1-2, 4, 6-7, 9, 11-13, 15-20	NO
Inventive step (IS)	Claims	5	YES
	Claims	1-4, 6-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO

2. Citations and explanations

Document 1: JP 9-213359 A (Matsushita Electric Industrial Co., Ltd.), 15 August 1997, & EP 788172 A1, & US 6057051 A

Claims 1 and 2, 4, 6 and 7, 9, 11 and 13, and 15 to 20 lack novelty and do not involve an inventive step in the light of document 1 cited in the international search report.

Document 1 discloses a fuel cell installed and used in a portable device and having a hydrogen-occluding cylinder for occluding hydrogen required by the fuel cell, wherein heat generated in the fuel cell main body is guided to the hydrogen-occluding cylinder, thereby heating the hydrogen-occluding cylinder. Further, document 1 also discloses a feature wherein the air that has been used to cool the device main body can be used as a reactive component, which because it is preheated, efficiently promotes the electrochemical reactions of the fuel cell (paragraph [0016]).

The hydrogen generated from the hydrogen-occluding cylinder in the invention disclosed in document 1 is also recognized as being heated.

Claims 3, 8, and 14 do not involve an inventive step in the light of document 1 cited in the international search report.

Fuel cells having a fuel which is liquid at room temperature are standard, and as disclosed in document 1, using a reactive component to cool a device main body, thereby heating the reactive component, and supplying the reactive component to a fuel cell main body is a known technique, and thus, a person skilled in the art could easily conceive of applying this technique and heating a fuel in liquid form by using it to cool a device main body and supplying the fuel to a fuel cell main body.

Claim 10 does not involve an inventive step in the light of document 1 cited in the international search report.

The invention disclosed in document 1, wherein the fuel cell is provided on the rear surface of a display, is merely a design feature fittingly determined at the discretion of a person skilled in the art.

Claim 5 is novel and involves an inventive step.

The fuel cell described in claim 5 is not disclosed in any of the documents cited in the international search report, nor could it be easily derived from any of the documents cited in the international search report.

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date *(day/month/year)*	Filing date *(day/month/year)*	Priority date (valid claim) *(day/month/year)*
JP 2002-231290 A [E, X]	16 August 2002 (16.08.2002)	26 January 2001 (26.01.2001)	

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure *(day/month/year)*	Date of written disclosure referring to non-written disclosure *(day/month/year)*